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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/800,008

03/15/2004

Noriya Hayashi

080542-0166

6818

22428 7590 06/04/2008  
FOLEY AND LARDNER LLP  
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EXAMINER

GILLESPIE, BENJAMIN

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/04/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/800,008	<b>Applicant(s)</b> HAYASHI ET AL.	
	<b>Examiner</b> BENJAMIN J. GILLESPIE	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4/18/2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4-12 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-12 and 16-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/18/2008</u> .                                               | 6) <input type="checkbox"/> Other: _____                          |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/18/2008 has been entered.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of 35 U.S.C. 103(a) and 102(b) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 4-8, 10-12, and 16-20 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Heine ('064) as exemplified by Hans et al ('438). Heine teaches a fiber reinforced thermosetting polyurethane composition comprising the reaction product of polyol and polyisocyanate (Abstract; col 1 lines 9-11; col 3 lines 8-24). In particular patentee teaches that the composition may contain up to 75% by weight of polypropylene glycol, which has an average molecular weight ranging from 62 to 400, and the polyisocyanate is present relative to the polyol in a NCO:OH ratio of 0.9:1 to 1.1:1 (col 3 lines 18-21, 22-24; col 4 lines 21-28; col 6 lines 16, 27-28). Regarding applicants' "isocyanate being liquid at room temperature" limitation, Heine et al teach polyisocyanates exhibit a viscosity of 150 mPa.s at 25°C and may furthermore comprise biurets, which are liquid at room temperature

as exemplified by Hans et al (Heine et al; col 7 lines 1-2; col 10 lines 55-57; Hans et al; col 3 lines 61-63; col 4 lines 12-14).

3. Regarding the claimed amounts of fibrous material, Heine explains that said material may be present by 20 to 90% by weight based on the total composition, and although this is not in terms of volume percentage, based on the breadth of the disclosed and claimed ranges, the position is taken that Heine inherently satisfies the claimed range (Col 3 lines 14-16). Regarding the method of claims 6, and 20, as well as the “shape memory” limitation, patentee explains the fibrous material is impregnated with an uncured polyurethane resin, which is then cured. The resulting polyurethane can then be reheated thereby allowing the polyurethane to be reshaped (Col 7 lines 45-62, 67-68; col 8 lines 1-5).

4. Finally, it is noted that Heine is silent in disclosing the glass transition temperatures of the resulting polyurethane, nevertheless when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim it is appropriate for the examiner to make a rejection under both the applicable section of 35 U.S.C. 102 and 35 U.S.C. 103 such that the burden is shifted to applicant to provide clear and convincing factual evidence that the respective products do in fact differ in kind. *In re Brown*, 59 CCPA 1063, 173 USPQ 685 (1972); *In re Fessman*, 180 USPQ 324 (CCPA 1974).

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 4-12, 14-20 have been considered but are moot in view of the new ground(s) of rejection. Applicants' argue that the claimed invention is not anticipated nor rendered obvious by Heine et al ('064) because patentees fail to teach polyisocyanate that is “liquid at room temperature,” and instead patentees teach mixing the

reactants "in the melt," which is only utilized when reactants do not exhibit a sufficiently low viscosity at room temperature; the examiner disagrees. As previously discussed in paragraph 2, Heine et al clearly teach polyisocyanates that are liquid at room temperature, and furthermore the language "in the melt," is merely to show that conditions are operated in the absence of solvent. Therefore the examiner maintains the rejection of the claimed invention over Heine et al.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN J. GILLESPIE whose telephone number is (571)272-2472. The examiner can normally be reached on 8am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rabon Sergent/  
Primary Examiner, Art Unit 1796

Application/Control Number: 10/800,008  
Art Unit: 1796

Page 5

B. Gillespie